

CLAIMS

1. A powder paint composition comprising at least
(a) a thermosetting polymer having functional groups capable of reacting with
5 β -hydroxyalkylamide units
(b) a compound comprising β -hydroxyalkylamide units and
(c) a deceleration agent, capable of reversibly blocking the functional groups
of polymer (a),
wherein the deceleration agent is present in an amount sufficient to block at
10 least 9 % of the total amount of functional groups of polymer (a).
2. A powder paint composition according to Claim 1 characterised in that the
polymer (a) is a carboxylic acid functional polymer or an anhydride functional
polymer.
3. A powder paint composition according to any one of Claims 1-2, characterised
15 in that the deceleration agent (c) is a compound according to formula (III)
and/or (IV):
$$\text{YR}^1\text{R}^2\text{R}^3 \qquad \qquad \qquad ((\text{III}))$$

or

$$(\text{YR}^1\text{R}^2\text{R}^3\text{R}^4)^+\text{X}^- \qquad \qquad \qquad (\text{IV})$$

20 wherein:
Y is N or P,
 R^1 , R^2 , R^3 or R^4 are independently of each other, substituted or unsubstituted
carbon chains with 1-50 carbon atoms in the main chain and
 X^- is halide.
- 25 4. A powder paint composition according to Claim 3 characterised in that the
deceleration agent (c) is a compound according to formula (III).
5. A powder paint composition according to any one of Claims 3-4 characterised
in that Y is N.
6. A powder paint composition according to any one of Claims 3-5 characterised
30 in that R^1 , R^2 , R^3 and R^4 are unsubstituted carbon chains.
7. A powder paint composition according to any one of Claims 1-6 characterised
in that the deceleration agent is octyldimethylamine, decyldimethylamine,
dodecyldimethylamine, tetradecyldimethylamine, hexadecyldimethylamine,
octadecyldimethylamine, hydrogenated tallow alkyl)-dimethylamine and/or
35 hexadecyldimethylamine.
8. A process for the preparation of a powder paint composition according to any
one of Claims 1-7 comprising at least the steps of:

- a) producing a polymer (a) having functional groups capable of reacting with β -hydroxyalkylamide units at the processing temperature T_p ;
 - b) adding a deceleration agent (c) to the polymer at temperature T_a , wherein T_a is equal to or lower than T_p but higher than the T_g or T_m of the polymer, in an amount sufficient to block at least 9% of the functional groups of the polymer (a) capable of reacting with β -hydroxyalkylamide units.
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9. A process according to Claim 8, wherein the deceleration agent is added before the polymer is cooled down to below its T_g or T_m .
 10. The use of a tertiary compound according to formula (III) and/or (IV):
$$YR^1R^2R^3 \quad ((III))$$

or

$$(YR^1R^2R^3R^4)^+X^- \quad (IV)$$
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- wherein:
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- Y is N or P
- R^1 , R^2 , R^3 or R^4 are independently of each other, substituted or unsubstituted carbon chains with 1-50 carbon atoms in the main chain and
- X^- is halide
- as a deceleration agent in a powder paint composition comprising a β -hydroxyalkylamide compound.
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11. A process for curing a powder paint composition according to any one of Claims 1-7 or a powder paint composition obtained by the process according to any one of Claims 8-9 whereby the powder paint composition is first applied to a substrate and then cured.
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